

WINTER ALERT

Most coal mine gas and dust explosions occur during the fall and winter. During the winter months, cold air entering mines causes mine surfaces to dry out. Cold air is warmed as it travels through the underground mine and picks up moisture from the roof, rib and floor. The result is drier surfaces and drier coal dust. Coal dust and float coal dust can contribute to dust explosion hazards. If suspended in the mine atmosphere, fine, dry coal dust will explode if ignited, even without the presence of methane. Explosions are more likely to happen when the barometer falls because methane gas in unventilated or poorly ventilated areas expands, potentially traveling closer toward ignition sources.



PREVENTING EXPLOSIONS

- **Maintain Adequate Ventilation:** Ample ventilation is the first line of defense against an ignition or explosion.
- **Make Frequent Tests for Methane:** During the winter alert, gas tests should be made more frequently than usual.
- **Maintain Effective Bleeder Systems and Seals:** Tests for proper airflow, methane, and oxygen deficiency can warn of dangerous accumulations of explosive or noxious gases and assist in detecting malfunctioning bleeders or seals.
- **Maintain Water Sprays and Dust Collectors:** Water sprays and dust collectors reduce the fuel available for a potential fire or explosion.
- **Use Special Precautions when Mining Near, or Into, Inaccessible Areas:** The drilling of test holes to prevent accidental mining into such areas is of prime importance.
- **Clean Up Loose Coal, Coal Dust and Other Combustible Material:** The possibility of a fire or explosion can be diminished by reducing the fuel supply.
- **Apply Rock Dust Liberally:** Generous applications of rock dust can prevent the propagation of coal dust explosions.

